

Investigating Malaysian Prereader's Cognitive Processes when Reading English Picture Storybooks: A Comparative Eye-Tracking Experiment

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Abstract : There are numerous studies that explored young learners' literacy skills in Malaysia but none that uses the eye-tracking device to track their cognitive processes when reading picture storybooks. This study used this method to investigate two groups of prereaders' cognitive processes in four conditions. (1) A congruent picture was presented, and a matching narration was read aloud by a recorder; (2) Children heard a narration telling about the same characters in the picture but involves a different scene; (3) Only a picture with matching text was present; (4) Students only heard the reading aloud of the text on the screen. The two main objectives of this project are to test which content of pictures helps the prereaders (i.e., young children who have not received any formal reading instruction) understand the narration and whether children try to create a coherent mental representation from the oral narration and the pictures. The study compares two groups of children from two different kindergartens. Group1: 15 Chinese children; Group2: 17 Malay children. The medium of instruction was English. An eye-tracker were used to identify Areas of Interest (AOI) of each picture and the five target elements and calculate number of fixations and total time spent on fixation of pictures and written texts. Two mixed factorial ANOVAs with the storytelling performance (good, average, or weak) and vocabulary level (low, medium, high) as between-subject variables, and the Areas of Interests (AOIs) and display conditions as the within-subject variables were performed on the variables.

Keywords : eye-tracking, cognitive processes, literacy skills, prereaders, visual attention

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